

Improving Blood Pressure Control in the Community: Can New Technologies Help Us?

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Blood pressure (BP) control in the community is known to be insufficient in most countries and several reasons have been proposed to explain this disappointing situation, including the lack of motivation of physicians, the complexity of treatment regimens in polymorbid patients, the occurrence of side effects of drugs, and drugs costs.¹ One of the main issue in the long-term management of chronic diseases, and particularly silent conditions such as hypertension and dyslipidemia, is the progressive decrease in persistence to drug therapy that occurs with time, therefore only a fraction of patients are still under treatment after a few years of management.

The nonpersistence phenomenon is now well recognized, but how can we modify this pattern of behavior and improve long-term BP control? Can new technologies help us? In fact, new technologies have already helped us a lot. With the development of electronic devices enabling to monitor long-term drug adherence, we have improved considerably our understanding of the patients' behaviors regarding their therapies.¹ At present, the next step will be to change these behaviors to improve drug adherence and BP control. Among the several solutions proposed, one important approach is the empowerment of patients and in this respect, the development of new and simpler BP devices that enable patients to monitor reliably their BP outside the physician's office has been a major step forward. Regular contacts between physicians and patients have also been shown to improve persistence and to reduce the possible complications of a poor drug adherence. In recent years, several tele-monitoring systems have been developed that enable a regular contact between patients and treating physicians.²⁻⁴ These systems are generally well accepted by patients (often better by patients than by physicians!), but their generalization is often limited by technical issues and the difficulty of some patients to deal with the technique. In this issue of the *Journal*, Logan et al⁵ report the development and pilot testing of another home BP tele-management system that involves a mobile phone and a Bluetooth-enabled home BP monitor. The originality of this project is that the investigators have

involved patients and treating physicians in their program, using focus groups to design the system's development. In addition, the system appears to be very simple for the patients and a fax-back system maintains the physicians continuously informed. Preliminary results obtained in diabetic hypertensive subjects, using a pre-post study design, suggest that this approach could help improve BP control. This is encouraging, but it is evident that this approach now needs to be tested in a prospective, controlled study to confirm its added-value for hypertension management and this study is apparently on the way.

What is the future of such approaches? Some physicians will of course consider this technique as a new "gadget." This is generally the main criticism made to these types of development. Nevertheless, these developments are important. They will certainly not solve all problems and will not be applicable to all patients. Yet, we do need multiple approaches to individualize the patient's management. Tele-medicine does not exclude other solutions and should be complementary to educational programs and behavioral approaches. Whatever the technique, if one can demonstrate that it is clinically effective, accepted by patients, and financially affordable, it should be implemented to ameliorate BP control.

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